



Direct Thermal



Thermal Transfer

WS4

World standard desktop printers for multiple applications

EASY OPERATION

- Wide-open access
- One-touch control
- Simple label setting
- Clear user indicators
- Easy maintenance

FLEXIBLE MEDIA

- 4" Direct & Thermal Transfer models
- Ribbon up to 300M
- Face-in/Face-out media
- Adjustable I-mark sensor
- Auto-calibration

EASY INTEGRATION

- 5 emulations as standard
- Bluetooth & WLAN options
- Cutter, Dispenser, Offwinder options
- Management utilities
- USB firmware upgrade

TECHNICAL INFORMATION **WS4 Printer Series**

PRINTING SPECIFICATION			WS408	WS412
Printing Method			Direct Thermal and Thermal Transfer models	
Print Resolution			8 dots / mm (203 dpi)	12 dots / mm (305 dpi)
Max. Print Area	Width mm (inch)		104mm (4.09")	104mm (4.09")
	Length mm (inch)		996mm (39.33")	996mm (39.33")
Print Speed, mm/sec (ips)			Up to 152.4mm/sec (6 ips)	Up to 102mm/sec (4 ips)
CPU			32-bit 9260 RISC	
Printer Memory			Flash ROM: 16MB, RAM: 32MB User Memory: 2MB External USB User Memory: 16GB	
CONSUMABLES SPECIFICATION				
Sensor Type			Adjustable I-Mark Sensor (Reflective), Label Gap Sensor (Transmissive), Label Taken sensor, Head Open sensor	
Media Type			Roll or fan-fold die cut labels, Plain paper face stock, Continuous stock, Tag, Ticket	
Media Thickness			0.06 – 0.19mm (0.002" – 0.007")	
Label Shape	Diameter		Roll Max. outside diameter: Ø 127mm (5"), Core diameter: 25.4mm / 38mm (1" / 1.5")	
	Wind Direction		Face-in / Face out	
Label Size	Continuous	Width	22.4 – 115mm (0.88" – 4.53")	22.4 – 115mm (0.88" – 4.53")
		Length	8 – 996mm (0.31" – 4.53")	8 – 996mm (0.31" – 4.53")
	Tear-Off	Width	22.4 – 115mm (0.88" – 4.53")	22.4 – 115mm (0.88" – 4.53")
		Length	DT: 30 - 996mm, TT: 8 - 996mm (DT: 1.18" – 4.53", TT: 0.31" – 4.53")	DT: 30 - 996mm, TT: 8 - 996mm (DT: 1.18" – 4.53", TT: 0.31" – 4.53")
	Cutter	Width	22.4 – 115mm (0.88" – 4.53")	22.4 – 115mm (0.88" – 4.53")
		Length	DT: 35 – 993mm TT: 19.4 - 993mm (DT: 1.38" – 39.09" TT: 0.76" – 39.09")	DT: 35 – 993mm TT: 19.4 - 993mm (DT: 1.38" – 39.09" TT: 0.76" – 39.09")
	Dispenser	Width	22.4 – 115mm (0.88" – 4.53")	22.4 – 115mm (0.88" – 4.53")
		Length	DT: 35 – 150.4mm TT: 23.4 – 150.4mm (DT: 1.38" – 5.92" TT: 0.92" – 50.92")	DT: 35 – 150.4mm TT: 23.4 – 150.4mm (DT: 1.38" – 5.92" TT: 0.92" – 50.92")
Ribbon TT Model	Length	Max. 300 metres. Centre justified		
	Width	40mm - 110mm (1.57" – 4.33")		
	Core Diameter	12.7 mm (0.5") for 74/91/100m ribbons. 25mm (1") for 300m ribbon		
	Wind Direction	Face-in / Face-out		
FONTS / SYMBOLOGIES				
Internal Fonts Unicode supported	Standard Bitmap	Bitmap Fonts XS, XU, XM, XB, XL, OCR A, OCR B,		
	Scaleable fonts	CG Times, CG Triumvirate		
Barcode	1D Barcode	UPC-A/E, JAN/EAN-8/13, Code 39, Code 93, Code 128, GS1-128 (UCC /EAN128), Codabar (NW–7), Interleaved 2 of 5, MSI, GS1 Databar: Omni, Truncated, Stacked, Stacked Omni, Limited, Expanded, Expanded stacked. UPC Add-on, Postnet, Industrial 2 of 5. Composite: JAN/EAN-8/13, UPC A/E, GS1 Databar, Truncated and Stacked.		
	2D Barcode	PDF417 including Micro pdf, MAXI Code, QR Code, GS1 Data Matrix (ECC200)		
Print Rotation	Character Data / Barcode	0°, 90°, 180°, 270°		
COMMUNICATION INTERFACES				
Interfacing		LAN model: USB + LAN, Standard Model: USB + RS232C + LAN, Options: Wireless LAN b/g/n and Bluetooth		
		LAN protocols: ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, Socket, LPR, SNMPv2		
Command languages (Printer language emulations)		SBPL SATO Barcode Printer Language, SZPL, SEPL, SDPL, SIPL		
OPERATING CHARACTERISTICS				
Power Requirements		Input voltage adapter: AC100V-240V (auto switching)/60W (peak) – Input voltage printer: 19V/3A		
Environment	Operating	5 – 40°C / 25 – 85% RH (without condensation)		
	Storage	-40 – 60°C / 10 – 90% RH (without condensation)		
Dimension (W x D x H)		DT Model: 183.8 x 225.9 x 166mm	TT model: 220.6 x 278.5 x 187.5mm	
Weight		DT model: 1.74Kg	TT model: 2.48Kg	
Indicators		2 x 3-colour LED		
MISCELLANEOUS				
Certifications		FCC, UL, CSA, CCC, CE, TUV GS, EAC, ROHS compliant. Cerner Validated.		
Self-diagnostics		Error detection functions, Printhead overheat function, Printhead element check		
Ease of service		Thermal printhead and Platen roller easily replaced		
OPTIONS & MANAGEMENT				
Accessories		Dispenser, Full cutter, Wireless LAN, Bluetooth Interface, Large Media Roll Offwinder		
SATO SUPPORT				
A full range of SATO-manufactured labels, tags and ribbons. SATO Value Support after-sales maintenance				